

REMARKS/ARGUMENTS

This Amendment is submitted in response to the Office Action mailed June 24, 2010. At that time claims 1-11 were pending in the application.

By this Amendment, claim 1 has been amended and claims 12-14 have been added. Accordingly, claims 1-14 are presented for reconsideration by the Examiner.

Interview

Applicant expresses sincere thanks to Examiner Shipmon for the courtesy of the telephone interview with Applicant's representative, Whit Johnson, on October 22, 2010, in which elements of the Applicant's claims and proposed arguments and amendments were discussed in light of the art of record, including U.S. Patent No. 5,035,706 to Giantureo et al. and U.S. Publication No. 2002/0188344. Claim 1 and proposed amendments of the same were discussed. Agreement was reached that Applicant's proposed arguments and amendments overcome the rejections. Applicant has amended the claims in accordance with the proposed amendments and discussion of the same during the interview.

Rejections Under 35 U.S.C § 102 and §103

Claims 1-7 and 9 stand rejected under 35 U.S.C. 103(a) as being anticipated by U.S. Patent No. 5,035,706 to Giantureo et al. ("Giantureo") in view of U.S. Publication No. 2002/0188344 filed by Bolea et al. ("Bolea").

Claim 8 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Giantureo in view of Bolea, and further in view of U.S. Publication No. 2002/0058986 filed by Landau et al. ("Landau").

Claims 10 and 11 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Giantureo in view of Bolea, and further in view of U.S. Patent No. 6,375,676 to Cox ("Cox").

Applicant has amended independent claim 1 to recite that the “thread [is] positioned between annular segments.” Support for this amendment can be found, *inter alia*, in the specification on page 8, lines 10-13.

Applicant respectfully submits that Giantureo, Bolea, Landau, and Cox, individually or in combination, do not teach or suggest all the elements of the claims as amended.

A. Giantureo Does Not Teach Displacement of the Connector To Contract Multiple Annular Segments

Giantureo does not teach or suggest that “displacement of the connector relative to the stent along a longitudinal axis of the stent results in contraction of *at least two of the plurality of annular segments*.” Giantureo makes clear that displacement of the ends 56a and 56b merely results in contraction of only one end of the stent. Giantureo provides that “the free ends of the monofilament 56 can be pulled through the tube 70, thereby compressing or contracting **one end of the stent** to a reduced diameter. The successive eyes around the circumference of the stent of Giantureo are positioned at one end, such that pulling the ends of a thread passing through the successive eyes causes desired contracting of the one end of the stent. Only by compressing one end can the stent be removed in the manner taught by Giantureo. To remove a stent in the manner taught by Giantureo, the end of a stent must be compressed and drawn into a sheath, and the sheath then “contacts and compresses the remaining length of the . . . stent . . . [and] the entire assembly can be removed from the body passageway.” Giantureo col. 6, lines 6-12.

A person of ordinary skill would recognize that the design of the stent of Giantureo is such that only a single end of a stent can be contracted by a single thread. Multiple ends and/or multiple stents simply cannot be contracted by a single thread. The Office may assert that passing a thread through successive eyes that are not on an end, but at an intermediate portion where adjacent stents of a combination of multiple stents are coupled, as shown in FIGS. 5 and 6, would be obvious and would result in

contraction of multiple stents. Applicant respectfully submits that in fact this is not taught or suggested by Giantureo where such an arrangement would render Giantureo inoperable. In such an arrangement only a middle portion of the stent would contract, but not an end. Because only a middle portion of the stent would contract, and not an end, the stent simply could not be removed in the manner taught by Giantureo. Thus, Giantureo teaches away from a thread positioned at other than an end of a stent, and contracting multiple stents of Giantureo would not be obvious to a person of ordinary skill in the art. For at least these reasons, Giantureo does not teach or suggest that displacement of the connector relative to the stent results in contraction of at least two of the plurality of annular segments.

B. Giantureo Does Not Teach a Thread Positioned Between Annular Segments

Giantureo does not teach or suggest “a thread at least partially encircling the tubular support frame . . . positioned between annular segments” as recited in claim 1 as amended. Giantureo teaches away from any positioning of the thread away from the end of the stent, as previously explained. Pulling the ends of the thread of Giantureo must necessarily result in contraction of an end of the stent, so as to allow the contracted stent to be retracted into a sheath. Giantureo, Abstract; col. 2, lines 61-64; col. 5, lines 10-16; col. 6, lines 3-12. Were the thread positioned between the stent sections, for example of FIG. 6 of Giantureo, the end of the stent closest to the sheath would not be collapsed, the diameter of the stent at that end would remain biased in a configuration larger than the diameter of the sheath, and the stent could not be withdrawn into the sheath. Positioning the thread between stent sections would render Giantureo inoperable. Thus, Giantureo teaches away from positioning a thread between annular segments. Accordingly, a person of ordinary skill would not understand Giantureo to teach or suggest positioning of the thread between annular segments, as recited in the present claims.

C. Bolea Also Does Not Teach The Elements Missing From Giantureo

Bolea does not cure the deficiencies of Giantureo. Bolea does not teach any of the elements missing from Giantureo, including “a connector positioned inside the tubular support frame to securely couple together the first and second thread ends,” “displacement of the connector relative to the stent along a longitudinal axis of the stent results in contraction of at least two of the plurality of annular segments” and “a thread at least partially encircling the tubular support frame outside of the circumference of the tubular support frame and positioned between annular segments.”

The Office asserts that Bolea teaches a connector. Office Action p. 3-4, ¶ 3. Specifically, the Office observes that Bolea teaches a diameter controlling lasso (80). The Office is not express in its reasoning, but it seems the Office relies on an assumption that the lasso is necessarily connected to itself. Applicant respectfully submits, however, that the connector recited in claim 1 as amended is distinct from the thread (e.g., a distinct and separate component). A connector that fixedly couples together the first and second thread ends simply is not taught or suggested. Accordingly, Giantureo and Bolea, individually or in combination do not anticipate or render obvious claims 1-11.

D. Landau Does Not Teach The Elements Missing From Giantureo

Landau does not cure the deficiencies of Giantureo. The Office relies upon Landau as teaching “connectors that may be formed from a radiopaque material for the purpose of allowing the connector to be used as a marker.” Office Action p. 6, ¶ 11.

Landau does not teach or suggest a connector that performs the same function as the type of connector recited by claim 1. The connectors taught by Landau are “any structure used to form a joint or to join itself to another component or portion thereof. These connectors or connections establish a fluid flow path through various elements of the apparatus assembly, or system.” Landau ¶ [0068]. Doubtless, from this disclosure, the connectors of Landau are not a connector as recited in claim 1. That Landau

teaches what is termed a connector is not sufficient to teach or suggest a connector as disclosed and recited in the present claims. Because the connectors of Landau are so different from a connector as recited in the claims, Applicant submits that it would not be obvious to combine the teachings Landau with the teachings of Giantureo as proposed by the Office. Despite any teaching in Landau that “a connector may be formed from a radiopaque material,” an ordinarily skilled artisan simply would not find it obvious to combine that teaching with Giantureo. Therefore, Giantureo and Landau, in combination do not teach all the elements of claim 8, and thus do not render obvious claim 8 as amended.

Landau also does not teach that “displacement of the connector relative to the stent along a longitudinal axis of the stent results in contraction of at least two of the plurality of annular segments” and “a thread at least partially encircling the tubular support frame outside of the circumference of the tubular support frame and positioned between annular segments.” Nor does the Office assert that Landau teaches these elements. For at least the foregoing reasons, Giantureo, Bolea, and Landau, individually or in combination, do not teach all the elements of claim 1 as amended, and thus do not render obvious the claim claims 1-11.

E. Cox Also Does Not Teach The Elements Missing From Giantureo

Cox also does not cure the deficiencies of Giantureo. Cox does not teach any of the elements missing from Giantureo, including “a connector positioned inside the tubular support frame to securely couple together the first and second thread ends,” “displacement of the connector relative to the stent along a longitudinal axis of the stent results in contraction of at least two of the plurality of annular segments” and “a thread at least partially encircling the tubular support frame outside of the circumference of the tubular support frame and positioned between annular segments.” Nor does the Office assert otherwise. Accordingly, Giantureo, Bolea, Landau, and Cox, individually or in combination do not anticipate or render obvious claims 1-11.

F. Claims 12-14

Claim 12 recites many of the same elements as claim 1. For the Office's convenience, Applicant notes that claim 12 differs from claim 1 in that claim 12 recites "a thread encircling the tubular support frame . . . ," as compared to claim 1, which recites "a thread at least partially encircling the tubular support frame" Claim 12 also recites that the connector is "formed of a material distinct from the thread." Note that the term "encircling" is broad enough to cover the thread surrounding or mostly surrounding the tubular support frame. Finally, claim 12 does not specify positioning of the thread relative to the annular segments.

Applicant respectfully submits, for the reasons described above, Giantureo, Bolea, Landau, and Cox, individually or in combination, do not teach or suggest all the elements of claim 12, and thus do not anticipate or render obvious claims 12-14.

CONCLUSION

Applicant respectfully asserts that claims 1-14 are patentably distinct from the cited references, and requests that a timely Notice of Allowance be issued in this case. If there are any remaining issues preventing allowance of the pending claims that may be clarified by telephone, the Examiner is requested to call the undersigned.

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Respectfully submitted,

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